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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,574	07/30/2001	Alberto Ginesi	10.1019	2616

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EXAMINER	
LEE, JOHN J	

ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
06/27/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/919,574	GINESI ET AL.	
	Examiner	Art Unit	
	JOHN J. LEE	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,9-11,13,15,16,22-24,26 and 28-31* is/are rejected.

7)☒ Claim(s) *4-8,12,14,17-21,25 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-3, 9-11, 13, 15, 16, 22-24, 26, and 28-31 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-3, 9-11, 13, 15, 16, 22-24, 26, and 28-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al. (US patent number 6,549,520) in view of Ayyagari et al. (US 6,879,572).

Regarding **claim 1**, Gross discloses that a method of reducing power required for transmitting a signal from a first transceiver (10 in Fig. 3) to a second transceiver (12 in Fig. 3) (column11, lines 52 – column 12, lines 45 and Fig. 3). Gross teaches that estimating at said first transceiver (10 in Fig. 3) an excess amount of power (measuring and monitoring SNRs, excessive power level) used by said first transceiver (10 in Fig. 3) for transmitting said signal (column11, lines 52 – column 12, lines 58, Fig. 3, 6, and column 20, lines 49 - 67, where teaches the transceiver monitors and measures an signal noise ratios (excessive power) for feeding into the downstream). Gross teaches that the excess amount of power (measuring and monitoring SNRs, excessive power) for said signal is based at least in part on a value obtained during initialization (column 12, lines

22 – column 14, lines 46 and Fig. 3, 8, where teaches the transceiver monitors and measures an signal noise ratios (excessive power) for feeding into the downstream for the value gaining during initialization). Gross teaches that reducing a power use of said first transceiver by said excess amount of power to a reduced power level (desired power level) (column11, lines 52 – column 12, lines 58, Fig. 3, 8, and column 21, lines 38 – column 22, lines 15, where teaches reducing below the level (excess amount of power) of objection by reducing the power level (the power level at which the subscriber or downstream modem transmits to the central office or upstream modem)). Gross teaches that transmitting said signal from said first transceiver (10 in Fig. 3) using said reduced power level, wherein said reduced power level achieves a transmission rate of said signal within a predefined tolerance of a target rate thereof (column 14, lines 9 – 58 and Fig. 3, 8, and column11, lines 52 – column 12, lines 45, where teaches the transceiver transmits the signal using reduced power level for achieving a transmission rate within acceptable reducing the transmission rate).

Gross does not specifically disclose the limitation "the excess amount of power for said signal is based at transmitting in part on a value obtained during initialization". However, Ayyagari teaches the limitation "the excess amount of power for said signal is based at transmitting in part on a value obtained during initialization" (column 3, lines 37 – 55, Fig. 1, 2, and column 4, lines 44 - 63, where teaches the power (path gain) as determined by base station transmit at a known power (during initial contact with mobile user, the base station has stored in memory the characteristics of the mobile unit and what its power capability is for the unit), and the base station then measures the (initial)

received power). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Gross system as taught by Ayyagari, provide the motivation to enhance controlling power control so as to achieve desired data rate and interference in communication network system.

Regarding **claim 2**, Gross teaches that the first transceiver (10 in Fig. 3) is located at one of a central office (10 (telephone central office) in Fig. 3) and a remote loop carrier (local subscriber loop carrier), and comprises a downstream transmitter (14 in Fig. 3) and an upstream receiver (14 in Fig. 3), and wherein said second transceiver (12 in Fig. 3) is located at an end user location (Fig. 3) and comprises an upstream transmitter and a downstream receiver (Fig. 1, 3 and column 15, lines 24 – column 16, lines 20, where teaches the first transceiver is located at central office and local subscriber loop carrier, and comprising transmitter and receiver, and second transmitter having a transmitter and receiver).

Regarding **claim 3**, Gross and Ayyagari teach all the limitation as discussed in claim 1. Furthermore, Gross further teaches that the excess amount of power for said signal is estimated in accordance with a measured value of upstream attenuation (column11, lines 52 – column 12, lines 58, Fig. 3, 8, and column 21, lines 58 - column 22, lines 15, where teaches measuring and monitoring SNRs, excessive power level and reducing below the level (excess amount of power) of objection by reducing the power level (the power level at which the subscriber or downstream modem transmits to the central office or upstream modem)).

Regarding **claim 9**, Gross and Ayyagari teach all the limitation as discussed in claim 1. Furthermore, Gross further teaches that the first transceiver reduces said power in accordance with excess SNR provided by said second transceiver (column 11, lines 52 – column 12, lines 58, Fig. 3, 8, where teaches measuring and monitoring SNRs, excessive power level and reducing below the level (excess amount of power) of objection by reducing the power level (the power level at which the subscriber or downstream modem transmits to the central office or upstream modem), and the second transceiver notifies the power level to first transceiver).

Regarding **claim 10**, Gross teaches that a second initialization is required for transmitting said signal at said reduced power level (column 5, lines 9 – column 6, lines 27 and Fig. 3, 8, where teaches requiring by a complete reinitialization of the modem for exchanging control parameters (including desired power level)).

Regarding **claim 11**, Gross and Ayyagari teach all the limitation as discussed in claim 1. Furthermore, Gross further teaches that the excess amount of power is estimated by estimating an excess amount of SNR at said second transceiver for said target rate (column11, lines 52 – column 12, lines 58, Fig. 3, 6, and column 20, lines 49 - 67, where teaches the transceiver monitors and measures an excessive signal noise ratios (excessive power) for feeding into the downstream for achieving a transmission rate within acceptable reducing the transmission rate).

Regarding **claim 13**, Gross and Ayyagari teach all the limitation as discussed in claim 1. Furthermore, Gross further teaches that determining at said second transceiver an amount of excess power (measuring and monitoring SNRs, excessive power level) in the

signal transmitted from said first transceiver (10 in Fig. 3) (column11, lines 52 – column 12, lines 58, Fig. 3, 6, and column 20, lines 49 - 67, where teaches the transceiver monitors and measures an signal noise ratios (excessive power) for feeding into the downstream for the value gaining during initialization). Gross teaches that calculating at said second transceiver an attainable reduced power level for said transmitted signal (column 19, lines 10 – 62, Fig. 3, 8, and column 8, lines 5 - 60, where teaches calculating at a transceiver an reduced power margin, fixed signal-to-noise ratio for transmitting signal and adjusting the transmitting power level). Gross teaches that communicating said reduced power level between said second and first transceivers (column11, lines 52 – column 12, lines 58, Fig. 3, 8, and column 21, lines 38 – column 22, lines 58, where teaches measuring and monitoring SNRs, excessive power level and reducing below the level (excess amount of power) of objection by reducing the power level (the power level at which the subscriber or downstream modem transmits to the central office or upstream modem), and the second transceiver notifies the power level to first transceiver), wherein said first transceiver adjusts its power level during a first initialization and prior to a time period that would require a second initialization (column 8, lines 5 – column 9, lines 65, Fig. 3, 8, and column 13, lines 13 - 55, where teaches adjusting the transceiver adjusts its signal noise ratio (power level) by measuring and calculating the power level during the initialization, and if no parameter set is found within the time period, a complete reinitialization may be called).

Gross does not specifically disclose the limitation “determining at the second transceiver an amount of excess power in the signal transmitted during initialization”.

However, Ayyagari teaches the limitation "determining at the second transceiver (user, mobile unit) an amount of excess power in the signal transmitted during initialization" (column 5, lines 12 – column 6, lines 37 and Fig. 1, 2, where teaches determining excess power (resource) at second transceiver (mobile unit or base station) and transmitting at a known power (during initial contact with mobile user, the second station has stored in memory the characteristics of the mobile unit and what its power capability is for the unit), and the second station then measures the (initial) received power). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Gross system as taught by Ayyagari, provide the motivation to enhance controlling power control so as to achieve desired data rate and interference in communication network system).

Regarding **claim 15**, Gross and Ayyagari teach all the limitation, as discussed in claims 1 and 13. Furthermore, Gross teaches that estimating at said first transceiver (10 in Fig. 3) an excess amount of power (measuring and monitoring SNRs, excessive power level) used by said first transceiver (10 in Fig. 3) for transmitting said signal (column11, lines 52 – column 12, lines 58, Fig. 3, 6, and column 20, lines 49 - 67, where teaches the transceiver monitors and measures an signal noise ratios (excessive power) for feeding into the downstream). Gross teaches that the excess amount of power (measuring and monitoring SNRs, excessive power) for said signal is based at least in part on a value obtained during initialization (column 12, lines 22 – column 14, lines 46 and Fig. 3, 8, where teaches the transceiver monitors and measures an signal noise ratios (excessive power) for feeding into the downstream for the value gaining during initialization). Gross

teaches that for reducing power required for transmitting a signal from a central office asymmetric digital subscriber line (ADSL) termination unit (ATU-C) to a remote ADSL termination unit (ATU-R), wherein said ATU-C includes a processor for controlling said ATU-C to implement processing (Fig. 3, 4, column 3, lines 60 – column 4, lines 17, and column 15, lines 24 – 60, where teaches the first transceiver (central office, ATU-C) and second transceiver (a remote ADSL termination unit (ATU-R)) user interface are ADSL interfaces with processor for controlling). Gross teaches that transmitting said signal from said first transceiver (ATU-C) (10 in Fig. 3) using said reduced power level, wherein said reduced power level achieves a transmission rate of said signal within a predefined tolerance of a target rate thereof (column 14, lines 9 – 58 and Fig. 3, 8, and column11, lines 52 – column 12, lines 45, where teaches the transceiver transmits the signal using reduced power level for achieving a transmission rate within acceptable reducing the transmission rate).

Regarding **claim 16**, Gross and Ayyagari teach all the limitation, as discussed in claims 1 and 13. Furthermore, Gross teaches that the excess amount of power for said signal is estimated in accordance with a measured value of upstream attenuation (column11, lines 52 – column 12, lines 58, Fig. 3, 8, and column 21, lines 58 - column 22, lines 15, where teaches measuring and monitoring SNRs, excessive power level and reducing below the level (excess amount of power) of objection by reducing the power level (the power level at which the subscriber or downstream modem transmits to the central office or upstream modem)).

Regarding **claim 22**, Gross and Ayyagari teach all the limitation, as discussed in claims 1 and 13. Furthermore, Gross teaches that the first transceiver (ATU-C) reduces said power in accordance with excess SNR provided by said second transceiver (ATU-R) (column 11, lines 52 – column 12, lines 58, Fig. 3, 8, where teaches measuring and monitoring SNRs, excessive power level and reducing below the level (excess amount of power) of objection by reducing the power level (the power level at which the subscriber or downstream modem transmits to the central office or upstream modem), and the second transceiver notifies the power level to first transceiver).

Regarding **claim 23**, Gross and Ayyagari teach all the limitation, as discussed in claims 1 and 13. Furthermore, Gross teaches that a second initialization is required for transmitting said signal at said reduced power level (column 5, lines 9 – column 6, lines 27 and Fig. 3, 8, where teaches requiring by a complete reinitialization of the modem for exchanging control parameters (including desired power level)).

Regarding **claim 24**, Gross and Ayyagari teach all the limitation, as discussed in claims 1 and 13. Furthermore, Gross teaches that the excess amount of power is estimated by estimating an excess amount of SNR at said second transceiver (ATU-R) for said target rate (column11, lines 52 – column 12, lines 58, Fig. 3, 6, and column 20, lines 49 - 67, where teaches the transceiver monitors and measures an excessive signal noise ratios (excessive power) for feeding into the downstream for achieving a transmission rate within acceptable reducing the transmission rate).

Regarding **claim 26**, Gross and Ayyagari teach all the limitation, as discussed in claims 1 and 13. Furthermore, Gross teaches that determining at said second transceiver

(ATU-C) an amount of excess power (measuring and monitoring SNRs, excessive power level) in the signal transmitted from said first transceiver (10 in Fig. 3) (column11, lines 52 – column 12, lines 58, Fig. 3, 6, and column 20, lines 49 - 67, where teaches the transceiver monitors and measures an signal noise ratios (excessive power) for feeding into the downstream for the value gaining during initialization). Gross teaches that calculating at said second transceiver an attainable reduced power level for said transmitted signal (column 19, lines 10 – 62, Fig. 3, 8, and column 8, lines 5 - 60, where teaches calculating at a transceiver an reduced power margin, fixed signal-to-noise ratio for transmitting signal and adjusting the transmitting power level). Gross teaches that communicating said reduced power level to said ATU-C (column11, lines 52 – column 12, lines 58, Fig. 3, 8, and column 21, lines 38 – column 22, lines 58, where teaches measuring and monitoring SNRs, excessive power level and reducing below the level (excess amount of power) of objection by reducing the power level (the power level at which the subscriber or downstream modem transmits to the central office or upstream modem), and the second transceiver notifies the power level to first transceiver), wherein said first transceiver (ATU-C) adjusts its power level during a first initialization and prior to a time period that would require a second initialization (column 8, lines 5 – column 9, lines 65, Fig. 3, 8, and column 13, lines 13 - 55, where teaches adjusting the transceiver adjusts its signal noise ratio (power level) by measuring and calculating the power level during the initialization, and if no parameter set is found within the time period, a complete reinitialization may be called).

Regarding **claim 28**, Gross and Ayyagari teach all the limitation, as discussed in claims 1 and 13. Furthermore, Gross teaches that the ATU-C adjusts its power level during initialization at a time before transmission of C-REVERB (column 8, lines 5 – column 9, lines 65, Fig. 3, 8, and column 13, lines 13 - 55, where teaches adjusting the transceiver adjusts its signal noise ratio (power level) by measuring and calculating the power level during the initialization, and if no parameter set is found within the time period, a complete reinitialization may be called).

Regarding **claim 29**, Gross and Ayyagari teach all the limitation, as discussed in claims 1 and 13. Furthermore, Gross teaches that the first transceiver adjusts its power level before transmission of C-REVERB (column 8, lines 5 – column 9, lines 65, Fig. 3, 8, and column 13, lines 13 – 55, where teaches adjusting the transceiver adjusts its signal noise ratio (power level) by measuring and calculating the power level during the initialization, and if no parameter set is found within the time period, a complete reinitialization may be called).

Regarding **claim 30**, Gross and Ayyagari teach all the limitation, as discussed in claims 1 and 13. Furthermore, Gross teaches that the ATU-C adjusts its power level during initialization at a time before transmission of C-REVERB (column 8, lines 5 – column 9, lines 65, Fig. 3, 8, and column 13, lines 13 - 55, where teaches adjusting the transceiver adjusts its signal noise ratio (power level) by measuring and calculating the power level during the initialization, and if no parameter set is found within the time period, a complete reinitialization may be called).

Regarding **claim 31**, Gross and Ayyagari teach all the limitation, as discussed in claims 1 and 13. Furthermore, Gross teaches that a method of reducing power required for transmitting a signal from a first transceiver (10 in Fig. 3) to a second transceiver (12 in Fig. 3) (column11, lines 52 – column 12, lines 45 and Fig. 3). Gross teaches that estimating at said first transceiver (10 in Fig. 3) an excess amount of power (measuring and monitoring SNRs, excessive power level) used by said first transceiver (10 in Fig. 3) for transmitting said signal (column11, lines 52 – column 12, lines 58, Fig. 3, 6, and column 20, lines 49 - 67, where teaches the transceiver monitors and measures an signal noise ratios (excessive power) for feeding into the downstream). Gross teaches that the excess amount of power (measuring and monitoring SNRs, excessive power) for said signal is based at least in part on a value obtained during initialization (column 12, lines 22 – column 14, lines 46 and Fig. 3, 8, where teaches the transceiver monitors and measures an signal noise ratios (excessive power) for feeding into the downstream for the value gaining during initialization). Gross teaches that reducing a power use of said first transceiver by said excess amount of power to a reduced power level (desired power level) (column11, lines 52 – column 12, lines 58, Fig. 3, 8, and column 21, lines 38 – column 22, lines 15, where teaches reducing below the level (excess amount of power) of objection by reducing the power level (the power level at which the subscriber or downstream modem transmits to the central office or upstream modem)). Gross teaches that transmitting said signal from said first transceiver (10 in Fig. 3) using said reduced power level, wherein said reduced power level achieves a transmission rate of said signal within a predefined tolerance of a target rate thereof (column 14, lines 9 – 58 and Fig. 3,

8, and column11, lines 52 – column 12, lines 45, where teaches the transceiver transmits the signal using reduced power level for achieving a transmission rate within acceptable reducing the transmission rate).

Allowable Subject Matter

4. Claims 4-8, 12, 14, 17-21, 25, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose "the measured value of upstream attenuation is calculated as a difference between a total transmit power transmitted from said upstream transmitter and a measured power of an upstream signal received at said upstream receiver, the first transceiver estimates per carrier signal-to-noise ratio (SNR) in accordance with bit-per-carrier, power-per-carrier, and SNR margin information received from said second transceiver, the second transceiver indicates a power cutback implicitly by reducing power-per-carrier information, and the first transceiver provides said second transceiver with a minimum SNR inflated by a value N corresponding to said excess amount of power, and wherein said first transceiver transmits at a power level reduced by said value N if said second transceiver is capable of supporting said minimum SNR inflated by said value N" as specified in the claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hiramatsu et al. (US 6,539,234) discloses Radio Communication Terminal and Transmission Power Control Method.

Garrison et al. (US 5,924,015) discloses Power Control Method and Apparatus for Satellite Based Telecommunications System.

Information regarding...Patent Application Information Retrieval (PAIR) system... at 866-217-9197 (toll-free)."

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231
Or P.O. Box 1450
Alexandria VA 22313

or faxed (571) 273-8300, (for formal communications intended for entry)

Or: (703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to USPTO Headquarters, Alexandria, VA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John J. Lee** whose telephone number is **(571) 272-7880**. He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00 pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, **Nay**

Maung, can be reached on **(571) 272-7882**. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

J.L
June 22, 2008

John J Lee

/JOHN J LEE/
Examiner, Art Unit 2618